

IMPROVED METHOD FOR MANAGING A CACHE MEMORY USING A PREDICTIVE MODELING ENGINE TO SELECT A CACHING ALGORITHM

ABSTRACT

A caching system includes a caching profile that records a file identifier and an entry time for
5 each file that enters the caching system, and a predictive modeling engine that analyzes the
profile to determine metrics for members of a set of caching algorithms. The metrics may be
measures of clustering or scattering of the file identities entering the caching system. The
algorithm with the most favorable metric is selected as the preferred caching algorithm, and the
file is processed according to the preferred algorithm. In one embodiment of the invention, the
10 set of caching algorithms includes a most-used caching algorithm, a least-used caching
algorithm, a most-recently-used caching algorithm, and a least-recently-used caching algorithm.